

# APPENDIX D

## ARCHEOLOGICAL FEATURES

### (FROM PETERSON 2003)

Sites identified in the Coteau Mining Region contain stone rings, cairns, alignments, effigies, rock art, depressions, burials, and historic features such as the Ricker farmstead.

#### Stone Rings

The most common site type is reflected by the presence of stone rings. This property type includes all sites that exhibit stone rings or stone ring remnants (arcs). Although other features (cairns, stone alignments) also may be present, stone rings are the defining feature of these sites. Kehoe (1958, 1960 and 1961) argues convincingly that stone rings delineate discrete habitation areas associated with the use of tipis. Of the sites examined by Coteau, stone ring features are the most evident and most examined. As a result, more is known about this site type than any other.

To date, stone rings at a rate of 1 per 30 acres surveyed have been identified within the Coteau Mining Region. Within the WMA 1,285 stone rings have been recorded. The stone ring sites investigated by Coteau average eight rings per site, but this is affected by the presence of large sites that contain over 40 rings (Figure 2.2). Therefore, the median of four rings is likely to be a more accurate reflection of average site size. This is comparable to the information gathered for 20 counties in Montana (Boughton 1999). Sites that contain over 41 rings are statistical outliers and cannot be explained by random chance. This suggests that some factor (e.g., environmental, ideological) led to either very large concentrations of people or the tendency to repeatedly return to the same general location.

The cultural representatives who participated in an examination of sites in the West Mine Area generally disagree with the archaeological interpretation that stone rings usually represent the remains of a habitation structure (i.e., tipi). It has been suggested by a member of the Standing Rock Sioux Tribe that most of the stone ring features are likely fasting beds. The rings provide a conduit between the individual in prayer and the spirits above. A tribal representative indicated that all stone features are *wakan* and must be protected.

A member of the Three Affiliated Tribes indicated that women chose the location of camps. It was noted that stone circles of approximately the same size may be tipi rings, and all rings with an opening toward the east are tipi rings. Those rings that are made from rocks of differing size are

talking circles. Women determined where councils would be held and placed stones to mark the location where specific speakers should sit. A double circle marked a location where younger women were allowed to participate.

#### Cairns

Cairns represent the second most common type of feature observed in the Coteau Mining Region. Unfortunately, less is known about this feature type than about other stone features in the Plains. Occasionally, cairns are identified as caches or trash piles. Cairns larger than three meters in diameter, or that have high vertical profiles, represent a considerable amount of expended energy and may have played important roles, such as serving as burial markers and trail-side offering piles. For this reason, larger cairns are often investigated more thoroughly than are smaller cairns.

One hundred and eighty-seven sites in the Coteau Mining Region have cairns. Four hundred and five cairns have been recorded in the WMA. Some of these sites also contain rings and are labeled as ring sites. Others contain only cairns or are associated with stone features other than stone rings (e.g., alignments) and/or lithic debris and are identified as cairn sites. Excluding those sites that did not specify the number of cairns, 683 cairns have been identified in the Coteau Mining Region.

The accretional construction of cairns over time has been observed at a number of sites in the Northern Plains. They include Bad Pass Trail, the Rosebud Battlefield, the O'Connelly cairn, Arrow Rock and the burial at Bees Nest (Loendorf and Brownell 1980; Medicine Crow 1992; Peterson and Peterson 1995). These features are associated with trail markers (Bad Pass Trail), event markers (Rosebud Battlefield), spiritual markers (Arrow Rock) and burials (Bees Nest). A number of the cairns examined in the West Mine Area yielded diagnostics that can be attributed to more than one cultural period. These include Feature 3C at 32ME144 (McKean and Plains Village), Feature 33C at 32ME232 and Feature 9C at 32ME1589. These features also contain a number of unpatinated and heavily patinated Knife River flint flakes.

#### Alignments

Alignments are the next most common stone feature type in the Northern Plains. They represent meandering lines of rock

that cross the prairie, often point to features or terminate at steep drainage edges.

In the Coteau Mining Region, the alignments tend to be found in very homogeneous topographic settings with no abrupt breaks. In a number of cases, these alignments are directly located in proximity to stone rings, which would suggest that their use is related to habitation camps.

Two types of alignments were observed in the new permit areas. The first type consists of a linear arrangement of rocks that can range from 3 m to 150+ m in length. Individual rocks placed in a linear manner with no observable clusters represent this feature type. This type of alignment was identified at sites 32ME230, 32ME248, 32ME1513 and 32ME1589.

The second type of rock alignment is the most common in the Plains. Sets or groups of very small “cairns” or markers that form a line represent it. This type of alignment was observed at sites 32ME170, 32ME1294, 32ME1519, 32ME1520, 32ME1553, 32ME1560 and 32ME1568. In the new permit area, the markers are composed of 3 to 25 rocks. The overall length for this type of alignment ranges between 15 and 180 meters.

Rock alignments are often identified as drivelines; however, other interpretations, such as topographic markers (Frison 1991), prayer lines and medicine wheel remnants, have also been given (Peterson and Peterson 1995). Subsurface investigations are usually unproductive (K. Deaver 1983b:2-13), and the surface manifestation of these features often provides the only clue to their function. It is normally more productive to follow alignments and determine what other features (such as large burial cairns) or cultural materials (such as a bison bone bed) are associated than to excavate the alignment.

“Alignments, linear arrangements of cairns or single stones have traditional cultural value when they are prayer lines, demarcate the direction of a prominent individual’s war or ceremonial deeds or point to ceremonial structures such as medicine wheels” (Deaver and Fandrich 1999:2-5). Additionally, stone alignments may have been built as part of subsistence activities, used as drivelines by hunters to gauge how they wanted to move herd animals into traps. Other alignments may mark spirit trails or pilgrimage trails to sacred landforms.

During the inventory of the WMA, ten sites were identified as containing 21 rock/stone alignments. These include 32ME170, 32ME230, 32ME248, 32ME1294, 32ME1513, 32ME1519, 32ME1520, 32ME1560, 32ME1568, and 32ME1589. The cultural resource representatives did not comment on the alignments identified within the West Mine Area.

## Effigies

Stone effigies are arrangements of stones intended to portray specific figures or symbols. Zoomorphic effigies (Davis 1975:32; Hoffman 1953:12) and anthropomorphic representations (Deaver and Deaver 1984:16-21) have been reported at a number of locations.

In the Coteau Mining Region, only a few of these features have been documented. A possible petroform was identified at 32ME254 (Spath and Christensen 1991). However, subsequent investigation (Winzler et al. 1998) indicates it was naturally formed. An identified petroform was recorded at 32ME1486 within the West Mine Area. It is composed of a central cairn containing 46 rocks and measuring 2 m x 2.5 m with a trail of rocks extending over a distance of 17 meters.

Site 32ME1486, commonly called “the turtle effigy” was determined eligible for listing on the National Register of Historic Places as a Traditional Cultural Property. The site contains an effigy figure that has documented uses for traditional cultural purposes for a minimum of three generations and is actively used today (Deaver 2001).

The Crow and the Three Affiliated Tribes (Mandan, Hidatsa, Arikara) regard monumental stone structures, such as effigies and medicine wheels, as having sacred attributes. The Sioux and Assiniboines consider them *wakan*. Commonly, they have mythological associations with supernatural figures that make them appropriate places for fasting, prayer and making offerings. Cairns associated with these features commonly represent offerings.

Effigies mark locations that have always been, and continue to be, appropriate places for fasting, prayer and making offerings. The patterns made by the stones are recognized as representations of the spiritual qualities of the area. For generations people have visited these effigies and conducted ceremonies. They continue to use these places today when access is allowed.

## Rock Art

Rock art consists of symbols or figures that have been painted or pecked into stone. Pictographs are rock paintings that use natural pigments, while petroglyphs use etching, incising and pecking to depict anthropomorphic and zoomorphic figures. Various designs and representations are found in rock art, depending on the intended meaning being expressed by the artist. Interpretations concerning the significance of these features have been numerous and varied. The most common is the belief that the figures were created to evoke power.

One petroglyph (32ME113) is identified in the West Mine Area. In 1974, the petroglyph exhibited a grooved profile

of a hand and four parallel striations (Woolworth Research Associates 1974). By 1984 (LaVardera 1984), the hand was removed by collectors and today only the four striations remain.

For most Plains Indians, rock art sites (petroglyphs and pictographs) are almost always sacred. The art is either the product of spiritual beings, shaman or medicine people in a trance state, or they depict sacred or spiritual events or themes. From a generalized tribal perspective, all rock art sites deserve respect. Preserving the sites from disturbance by human agents shows respect. However, disturbance does not necessarily include the modern use and modification of these sites by tribal medicine people. Petroglyph and pictograph panels may be modified under very strict ceremonial conditions, usually at the direction of a spirit helper.

## Depressions

Depressions vary in form and in size and appear to have involved different excavation methods. Nine were recorded within the WMA. Some of these features are simply defined by shallow depressions in an otherwise seamless landscape; others are more complex with rocks lining their walls and in some cases defining their outline. The smaller features are circular and are less than two meters in diameter. Larger ones have irregular elliptical to rectangular shapes and measure between five and seven feet by 10 to 15 feet. The depressions are generally shallow, varying in overall depth from one-half to 1.5 feet.

The precise use of these depression features is unknown. Nor is it known if the features are prehistoric or historic in age. If they are prehistoric, they may represent quarrying activities for clay or lithic raw materials. They may also represent eagle-trapping pits or hunting blinds. If they are historic, they may represent prospect pits used to identify the depth and thickness of gravels or coal. In some cases, these features might be natural deformities in the landscape, caused by a number of interacting natural agents.

If the function and temporal affiliation of these features can be ascertained, and if they are associated with artifacts that can be analyzed, depressions may have the potential to address pertinent archaeological research questions. One depression at 32ME1551 yielded a Plains side-notched projectile and is therefore argued to be associated with a Plains Village component.

## Burials

Traditionalists do not regard burials as archaeological sites or historic properties. They see them as the final resting places of people, and as such, they should be treated with respect. Burial types commonly found in central North Dakota include cairn, mound and historic box burials. Burial

cairns are generally large (10+ ft) and tend to be located on the highest points in the area. Conical mounds commonly contain more than one burial. Historic grave types included subsurface interment of individuals with or without caskets. Sometimes caskets were put in crevices and sometimes left out on the surface (Lippincott 1987).

“Burial sites are sometimes used as vision quest localities and may on occasion contain sacred objects such as medicine bundles” (Deaver 1986:117). Offerings, such as prayer stones, beads, and tobacco, may also be left at burials. Not all burials, however, have physical markers, and therefore, some may be difficult to identify.

Human remains do not need to be present for a location to be a final resting place. Cairns are sometimes made to ensure that a person returns. If that individual should die while away from his homeland, the cairn will ensure that the spirit will return to its home. Those markers without human remains are no less sacred than those that are associated with human remains.

Site 32ME108 within the West Mine Area contains human remains. None of the cultural representatives feel that it is appropriate to remove human remains. Every attempt should be made to protect them. Human remains should be removed only when no other alternative is possible, and they must be placed in a safe place. The new location must be protected from any future intrusion.

## Historic Barn

Within the Ricker farmstead (32ME189) is a barn that embodies a German-Russian construction style that used native stone. German-Russian immigrants that homesteaded central North Dakota during the early 1900s brought this style. Few buildings utilizing this style of construction are extant in the region. As such, it reflects a rare example of the German-Russian vernacular construction techniques.

Avoiding this building is not a feasible option, and it is unlikely the building would survive transport. To mitigate the impact of mining, Historic American Building Survey documentation would be conducted. This documentation would include a scaled drawing and archival photography of the building. In addition, archival documents would be examined and local residents interviewed to explore the use of German-Russian vernacular construction techniques.

